

## **REMARKS**

Following entry of the foregoing amendments, claims 79 to 97 will be pending in this patent application. Claims 47 to 68, 71, and 73 to 78 have been canceled, without prejudice, and new claims 79 to 97 have been added, herein. Support for claims 79 to 97 is found throughout the specification as originally filed, including, for example, the original claims. Claims 79 to 97 thus do not introduce new matter into the application.

Applicants respectfully request reconsideration of the rejections of record in view of the foregoing amendments and the following remarks.

### **Objections to the Specification**

**A.** The specification has been objected to for containing hyperlinks. The appropriate paragraphs of the specification have been amended to remove the hyperlinks, obviating the objection. Applicants accordingly, respectfully request withdrawal thereof.

**B.** The specification has been objected to for containing references to amino acid sequences present in the sequence listing without providing the identification numbers of the sequences. The appropriate paragraphs of the specification have been amended to add sequence identification numbers, obviating the objection. Applicants accordingly, respectfully request withdrawal thereof.

### **Objection to the Claims**

Claims 65, 67, and 68 have been objected to for allegedly improperly referring to an “amylolytic protein...of claim 47” rather than the “agent” of claim 47. Without conceding the correctness of the assertion, and to advance prosecution, claims 65, 67, and 68 have been canceled herein, obviating the objection. Applicants accordingly, respectfully request withdrawal thereof.

### **Alleged Indefiniteness**

Claims 47, 53 to 68, 71, and 73 to 78 have been rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite for numerous reasons. Without conceding the correctness of the assertions made by the Office in support of the rejection, and to advance prosecution, claims 47, 53 to 68, 71, and 73 to 78 have been canceled herein. The bases for the rejection articulated in the official action do not apply to new claims 79 to 97, and applicants accordingly, respectfully request withdrawal thereof.

### **Alleged Lack of Written Description**

**A.** Claims 47, 53 to 68, 71, and 73 to 78 have been rejected under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement because the dependent claims allegedly do not indicate that any particular identity to a disclosed amino acid sequence is required in the amino acid sequence of the fusion partners of the hybrid  $\alpha$ -amylase recited in claim 47. Without conceding the correctness of the assertion, and to advance prosecution, claims 47, 53 to 68, 71, and 73 to 78 have been canceled herein, obviating the rejection. In addition, claim 79 recites that the chimeric amylolytic protein comprises an amino acid sequence that is at least 95 % identical to an amino acid sequence consisting of one or more segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase set forth in SEQ ID NO:4 fused to one or more segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase set forth in SEQ ID NO:2, and, hence, the bases of this rejection do not apply to new claims 79 to 97. Applicants accordingly, respectfully request withdrawal thereof.

**B.** Claims 54, 55, 65, 67, 74 to 76, and 78 have been independently rejected under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement because the specification allegedly fails to describe a genus of  $\alpha$ -amylases that diverge from a fusion of the mature *Bacillus amyloliquefaciens* and *Bacillus licheniformis*  $\alpha$ -amylases by amino acid substitutions, insertions, and deletions in any combination or pattern at any position. Without conceding the correctness of the assertion, and to advance prosecution, claims 54, 55, 65, 67, 74 to 76, and 78 have been canceled herein, obviating the rejection. In addition, as

discussed above, claim 79 recites a chimeric amylolytic protein comprising an amino acid sequence that is at least 95 % identical to an amino acid sequence consisting of one or more segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase set forth in SEQ ID NO:4 fused to one or more segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase set forth in SEQ ID NO:2, and this rejection thus does not apply to the new claims. Applicants accordingly, respectfully request withdrawal thereof.

### **Alleged Lack of Enablement**

Claims 47, 53 to 68, 71, and 73 to 78 have been rejected under 35 U.S.C. § 112, first paragraph for failing to comply with the enablement requirement because the specification allegedly fails to enable the preparation of fusion polypeptides in which the fusion partners have amino acid sequences that diverge in amino acid identity from either SEQ ID NO:2 or SEQ ID NO:4 by more than 95 %. Without conceding the correctness of the assertion, and to advance prosecution, claims 47, 53 to 68, 71, and 73 to 78 have been canceled herein, obviating the rejection. Notably, since claim 79 recites chimeric amylolytic proteins that comprise amino acid sequences that are at least 95 % identical to amino acid sequences consisting of one or more segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase set forth in SEQ ID NO:4 fused to one or more segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase set forth in SEQ ID NO:2, this rejection do not apply to new claims 79 to 97. Applicants accordingly, respectfully request withdrawal thereof.

### **Alleged Anticipation**

Claims 47, 48, 50, 53 to 68, 71, and 73 to 78 have been rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. patent number 5,736,499 (“the Mitchinson patent”). Without conceding the correctness of the assertion, and to advance prosecution, claims 47, 48, 50, 53 to 68, 71, and 73 to 78 have been canceled herein, obviating the rejection. Moreover, the Mitchinson patent fails to describe or suggest every limitation of new claims 79 to 97. Specifically, the patent fails to teach or suggest chimeric amylolytic proteins that comprise

**DOCKET NO.:** HENK-0060 (H4714)  
**Application No.:** 10/774,018  
**Office Action Dated:** September 24, 2007

**PATENT**

amino acid sequences that are at least 95 % identical to an amino acid sequence consisting of one or more segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase set forth in SEQ ID NO:4 fused to one or more segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase set forth in SEQ ID NO:2. The Mitchinson patent thus fails to anticipate the subject matter of claims 79 to 97, and applicants accordingly, respectfully request withdrawal of the rejection.

### **Information Disclosure Statement**

The Office indicates that an information disclosure statement has not yet been filed for this application. An information disclosure statement, PTO form 1449, and copies of 172 references cited on the form 1449 were filed for this application on June 21, 2004, however. A courtesy copy of the information disclosure statement, PTO Form 1449, and date-stamped return postcard (indicating that the information disclosure statement, PTO form 1449, and 172 references were received by the Patent Office on June 23, 2004) are being submitted herewith. Applicants respectfully ask the Office to return an initialed copy of the PTO Form 1449 to their undersigned representative, confirming consideration of the listed references.

**DOCKET NO.:** HENK-0060 (H4714)  
**Application No.:** 10/774,018  
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### **Conclusion**

Applicants believe that the foregoing constitutes a complete and full response to the official action of record. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

Date: December 12, 2007

/Jane E. Inglese/  
Jane E. Inglese  
Registration No. 48,444

Woodcock Washburn LLP  
Cira Centre  
2929 Arch Street, 12th Floor  
Philadelphia, PA 19104-2891  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439

**RECEIVED BY THE UNITED STATES  
PATENT AND TRADEMARK OFFICE**

**Paper:** Information Disclosure Statement (in duplicate) w/ First  
Class Certification; USPTO-1449 ( 4 pages); 172 references  
cited/172 references submitted; return postcard

**Applicant(s) :** Kottwitz, et al.

**Title:** DETERGENT AND CLEANING AGENT  
WITH HYBRID ALPHA AMYLOSES

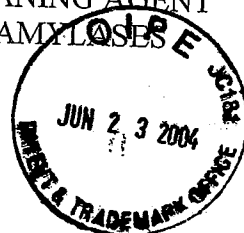
**Serial No.:** 10/774,018

**Filed:** February 6, 2004

**Docket No.:** HENK-0060/H4714

**Date Sent:** June 21, 2004

**Sent By:** LBM/BJH/kite



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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Kottwitz, et al.

Confirmation No.: Not yet known

Application No.: 10/774,018

Group Art Unit: Not yet known

Filing Date: February 6, 2004

Examiner: Not yet known

For: DETERGENT AND CLEANING AGENT WITH HYBRID ALPHA  
AMYLASES

DATE OF DEPOSIT: JUNE 21, 2004

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TYPED NAME: Heather Kite

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P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of the above identified application as set forth in § 1.491, before the mailing date

of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

- ☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

☐ Certification in Accordance with § 1.97(e) is attached;

or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

- ☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

- ☒ Copies of references listed on the attached Form PTO-1449 are enclosed herewith EXCEPT THAT:

- ☒ Copies of references 1-22 listed on the attached Form PTO 1449 are not required to be submitted pursuant to the June 30, 2003 recent revisions to 37 CFR § 1.98(a)(2)(i).



☒ In view of the voluminous nature of references 168 and 172, and the likelihood that these references are available to the Examiner, copies are not enclosed herewith. If any of the foregoing publications are not available to the Examiner, Applicant will endeavor to supply copies at the Examiner's request.

Where available, Applicants have provided English language counterparts or translations of those listed references which are not in the English language. Translations have not been provided for References 42, 62, 70-74, 115, 162, 163, 169 and 170. A concise explanation of the relevance of these documents is provided in the application as follows:

Reference 42 is described at page 3, lines 9-11;

Reference 62 is described at page 42, line 7;

Reference 70 is described at page 42, line 20;

Reference 71 is described at page 42, lines 21-22;

Reference 72 is described at page 42, lines 18-23;

Reference 73 is described at page 42, line 25;

Reference 74 is described at page 43, line 14;

Reference 115 is described at page 74, line 11;

References 162 and 163 are described at page 12, lines 16-26;

Reference 169 is described at page 72, lines 31-33; and

Reference 170 is described at page 78, lines 6-12.

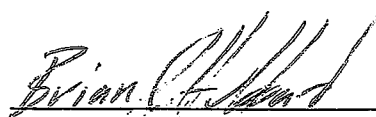
Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050. This form is submitted in duplicate.

DOCKET NO.: HENK-0060/H4714 - 4 -

PATENT

Enclosed is a copy of the corresponding PCT/EP02/08391 Search Report dated March 26, 2003.

Date: June 16, 2004

  
\_\_\_\_\_  
Brian J. Hubbard  
Registration No. 45,873

WOODCOCK WASHBURN LLP  
One Liberty Place - 46th Floor  
Philadelphia, PA 19103  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439

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## INTERNATIONAL SEARCH REPORT

 International Application No  
 PCT/EP 02/08391

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/62 C12N9/28 C11D3/386

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C11D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, EMBASE, SCISEARCH, CHEM ABS Data, SEQUENCE SEARCH

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96 23874 A (NOVONORDISK AS ;SVENDSEN ALLAN (DK); BISGAARD FRANTZEN HENRIK (DK)) 8 August 1996 (1996-08-08) cited in the application the whole document	1-46
X	WO 00 60059 A (NOVONORDISK AS) 12 October 2000 (2000-10-12) cited in the application the whole document	1-46
X	WO 97 41213 A (NOVONORDISK AS ;SVENDSEN ALLAN (DK); BORCHERT TÖRBN VEDEL (DK); B) 6 November 1997 (1997-11-06) cited in the application the whole document	1-46
	-/--	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

27 February 2003

Date of mailing of the international search report

26/03/2003

Name and mailing address of the ISA

 European Patent Office, P.B. 5618 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Novak, S

## INTERNATIONAL SEARCH REPORT

Int. Application No.

PCT/EP 02/08391

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CONRAD B ET AL: "HYBRID BACILLUS AMULOLIQUEFACIENS X BACILLUS LICHENIFORMIS ALPHA-AMYLASES CONSTRUCTION, PROPERTIES AND SEQUENCE DETERMINANTS" EUROPEAN JOURNAL OF BIOCHEMISTRY, BERLIN, DE, vol. 230, no. 2, 1995, pages 481-490, XP000960424 ISSN: 0014-2956 cited in the application the whole document	1-46
Y	DATABASE EBI 'Online! 21 July 1986 (1986-07-21) "Alpha-amylase precursor (EC 3.2.1.1)" Database accession no. P00692 XP002232998 the whole document	1-46
Y	DATABASE EBI 'Online! 1 January 1988 (1988-01-01) "Alpha-amylase precursor (EC 3.2.1.1)" Database accession no. P06278 XP002232999 the whole document	1-46

# INTERNATIONAL SEARCH REPORT

Information on patent family members

In International Application No  
PCT/EP 02/08391

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			JP 2000508914 T	18-07-2000
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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>		<b>Complete if Known</b>			
		Application Number	10/774,018		
		Filing Date	February 6, 2004		
		First Named Inventor	Kottwitz et al.		
		Art Unit	Not yet known		
		Examiner Name	Not yet known		
Sheet	1	of	4	Attorney Docket Number	HENK-0060/H4714

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number - Kind Code* (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-1,227,374	05/22/1917	Boidin et al.	
	2	US-5,972,873	10/26/1999	Nielsen et al.	
	3	US-5,723,323	03/03/1998	Kauffman et al.	
	4	US-3,623,957	11/30/1971	Feldman	
	5	US-4,264,738	04/28/1981	Stepanov et al.	
	6	US-6,075,001	06/13/2000	Wilde	
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	8	US-5,614,161	03/25/1997	Wilkens et al.	
	9	US-6,187,055 B1	02/13/2001	Kottwitz et al.	
	10	US-5,783,545	07/21/1998	Paatz et al.	
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	21	US-5,318,733	06/07/1994	Carduck et al.	
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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>2</sup> -Number <sup>3</sup> - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Country	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	23	WO96/23874 A1	08/08/1996	PCT		
	24	WO00/60059 A2	10/12/2000	PCT		
	25	WO97/41213 A1	11/06/1997	PCT		
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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/774,018
				Filing Date	February 6, 2004
				First Named Inventor	Kottwitz et al.
				Art Unit	Not yet known
				Examiner Name	Not yet known
Sheet	2	of	4	Attorney Docket Number	HENK-0060/H4714

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99	WO 95/32232 A1	11/30/1995	PCT		

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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			<b>Complete if Known</b>		
			Application Number	10/774,018	
			Filing Date	February 6, 2004	
			First Named Inventor	Kottwitz et al.	
			Art Unit	Not yet known	
			Examiner Name	Not yet known	
Sheet	3	of	4	Attorney Docket Number	HENK-0060/H4714

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				Filing Date	February 6, 2004
				First Named Inventor	Kottwitz et al.
				Art Unit	Not yet known
				Examiner Name	Not yet known
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